

ABSTRACT

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A method for the manufacturing of a Thin Film Inorganic Light Emitting Diode is disclosed. The device contains in one single layer or in a double layer a dispersion of zinc sulfide doped with a luminescent centre, and a water-compatible p-type semiconductive polymer, preferably a polythiophene/polymeric polyanion complex.

Replace the paragraph bridging pages 9 and 10 with the following paragraph:

The above mentioned objects are realized by providing a ~~methed~~ method for manufacturing a Thin Film Inorganic Light Emitting Diode device, said method comprising the following steps, in order, :

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- (1) preparing a nanoparticle dispersion of ZnS doped with a luminescent centre by precipitation from appropriate aqueous solutions comprising zinc ions, sulfide ions and dopant ions,
 - (2) washing said dispersion of doped ZnS to remove non-precipitated ions,
 - either,
 - (3) mixing said washed dispersion of doped ZnS (n-type semiconductor) with a water-compatible p-type semiconductive polymer,
 - (4) coating said mixture, optionally after admixture with a binder, onto a first conductive electrode,
 - (5) applying on top of said coated layer resulting from step (4) a second conductive electrode, with the proviso that at least one of said first and second electrode is transparent,
 - or,
 - (3') coating on top of a first conductive ~~layer~~ electrode a double layer pack comprising, in either order,
 - (3'a) a layer containing a water-compatible p-type semiconductive polymer, and,
 - (3'b) a layer containing said washed dispersion of doped ZnS, optionally admixed with a binder,

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over (4') applying on top of said coated layer pack resulting from step (3') a second conductive electrode, with the proviso that at least one of said first and second electrode is transparent.
